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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/540,972

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Kenichi Ishiga

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EXAMINER

DESIRE, GREGORY M

ART UNIT

PAPER NUMBER

2624

MAIL DATE

DELIVERY MODE

04/21/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/540,972	Applicant(s) ISHIGA, KENICHI	
	Examiner Gregory M. Desire	Art Unit 2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 February 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) See Continuation Sheet is/are pending in the application.
- 4a) Of the above claim(s) 19,21-23,37,38,40-52,54-62,64,66-79,88 and 89 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 5 and 9-12 is/are allowed.
- 6) ☒ Claim(s) 1,4,6-8,10,16-18,27,28,31,32, 35, 36 and 80-81 is/are rejected.
- 7) ☒ Claim(s) 82-87 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 August 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>6/27/05, 8/31/05 and 12/15/05</u> . | 6) <input type="checkbox"/> Other: _____ |

Continuation of Disposition of Claims: Claims pending in the application are 1,4-12,16-19,21-23,27,28,31,32,35-38,40-52,54-62,64 and 66-89

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of Species I in the reply filed on 2/13/09 is acknowledged. The traversal is on the ground(s) that the search and examination of the entire application could be made without serious burden. This is not found persuasive because it is the position of the examiner that a different search with serious burden would have to be made for the other species.

The requirement is still deemed proper and is therefore made FINAL.

2. Claims 19, 21-23, 37-38, 40-52, 54-62, 64, 66-79 and 88-89 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected Species II, III and IV, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 2/13/09.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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4. Claims 1, 4, 6-8, 10, 16-18, 27-28, 31-32, 35-36 and 80-81 are rejected under 35 U.S.C. 102(e) as being anticipated by Miyazawa (6,791,608).

Regarding claims 1, 8, 16 and 80-81 Miyazawa discloses,

An image obtaining unit (digital camera, fig. 1) that obtains an image captured with an image sensor (note fig. 1, 103, CCD); and

A defect information generating unit (note col.4 lines 10-15, the generated defect is stored) that generates defect information indicating a defect within the image having been obtained, based upon a value at a target pixel and an average value of a plurality of pixel values corresponding to pixels present within a predetermined range containing the target pixel (note col. 5 lines 35-40 and 44-50, examiner interprets predetermined range as threshold level, results of the comparing is indicating a defect, based on called-up image values) wherein:

The image sensor captures an image through an optical system (note col. 3 lines 65-67, CCD captures image through lens 200), ; and

The defect information is information on a projected image of a defect within an optical path, which manifests in the image (note col. 1 lines 25-30 and col. 5 lines 5-10, reads on dirt/dust adhered on ccd, manifests an image with dust/dirt).

Regarding claims 4 and 10 Miyazawa discloses,

An image obtaining unit (digital camera, fig. 1) that obtains an image captured with an image sensor (note fig. 1, 103, CCD); and

A defect information generating unit (note col.4 lines 10-15, the generated defect is stored) that generates defect information indicating a defect within the image having been obtained, based upon a value at a target pixel and an average value of a plurality of pixel values corresponding to pixels present within a predetermined range containing the target pixel (note col. 5 lines 35-40 and 44-50, examiner interprets predetermined range as threshold level, results of the comparing is indicating a defect, based on called-up image values); and

A correction unit (note fig. 5, block s45 corrects image defect) that corrects the defect within the image based upon the defect information (note fig. 5, block s43 and s44, image corrected based on the defect and dirt the defect information), wherein:

The correction unit determines a correction value by using an initial signal value indicated at a correction target pixel position (note col. 6 lines 34-38, correction is base on surrounding normal image data, interpret as surround pixel data elements).

Regarding claims 6 and 7 Miyazawa discloses,

An image obtaining unit (digital camera, fig. 1) that obtains an image captured with an image sensor (note fig. 1, 103, CCD); and

A defect information generating unit (note col.4 lines 10-15, the generated defect is stored) that generates defect information indicating a defect within the image having been obtained, based upon a value at a target pixel and an average value of a plurality of pixel values corresponding to pixels present within a predetermined range containing the target pixel (note col. 5 lines 35-40 and 44-50, examiner interprets predetermined

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range as threshold level, results of the comparing is indicating a defect, based on called-up image values);

The image obtaining unit obtains a plurality of images captured with image sensor (note col. 3 lines 60-66 and col. 4 lines 3-15, the functionality of the digital camera allows for the capturing of more than 1 image);

The defect information generation unit (processor 115) generates defect information indicating a defect within one of the plurality of images by using the plurality of images having been obtained (note col. 6 lines 39-45);

Regarding claim 17 Miyazawa discloses,

The image obtaining unit obtains (camera) a reference image photographed within a predetermined period of time preceding or following a time point at which the correction target image is photographed (note col. 6 lines 34-38).

Regarding claim 18 Miyazawa discloses,

The image obtaining unit obtains a reference image photographed at a time point closest to or second closest to a time point at which the correction target image is photographed (note col. 6 lines 34-38).

Regarding claims 27 and 31 Miyazawa discloses,

Wherein: the defect information generating unit simultaneously generates information indicating a position of the projected image of the defect within the optical

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path and information indicating intensity of the projected image of the defect within the optical path and records the position information and the intensity information (note col. 5 lines 35-39).

Regarding claims 28 and 32 Miyazawa discloses,

The defect information generating unit moves the predetermined range over which the average value is calculated for each target pixel and generates continuous sets of information related to the intensity of the projected image of the defect within the optical path (note col. 5 lines 1-9).

Regarding claims 35 and 36 Miyazawa discloses,

The predetermined rang containing the target pixel is greater than the range over which the projected image of the defect within the optical path inside the reference image (note col. 5 lines 1-4).

Allowable Subject Matter

5. Claims 5 and 9-12 are allowed.
6. The following is an examiner's statement of reasons for allowance: for independent claims 5 and 9. The distinguishing features are generation unit includes a relative ration calculation unit and correction unit corrects by multiplying a value at a corresponding pixel by a reciprocal of the relative ration. These features in combination

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with the other features are not taught in the prior art. Claims 10-12 depend on claim 9.

Therefore are also allowable.

7. Claims 82-87 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory M. Desire whose telephone number is (571) 272-7449. The examiner can normally be reached on M-F (6:30-3:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bella C. Matthew can be reached on (571) 272-7778. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

G.D.

April 13, 2009

/Gregory M. Desire/
Primary Examiner, Art Unit 2624